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Race Heats Up To Build Future Navy Test System

Grumman wins contract for next phase of Consolidated Automated Support System development

Grumman Aircraft Systems has won another lap in the race to build the Navy's next-generation of automatic test systems, called the Consolidated Automated Support System (CASS).

In the next decade, CASS will be the standardized test system for a majority of the electronics used to operate aircraft, ships and submarines.

The CASS program will provide a total support system consisting not only of ATE hardware and software, but integrated logistics support (ILS) and a management information system. ILS entails items such as spares, publications and skills training.

Grumman's new contract is for Phase II-A, the pre-full scale development effort. Aircraft Systems' ILS Department manages the program. Grumman's Electronics Systems Division, General Dynamics Electronics, and Hughes Aircraft are teamed as major subcontractors.

The Navy awarded two identical contracts, one to the Grumman team and another to the General Electric-led team. Teams led by Sperry and Harris Corporations also bid.

Under the Phase II-A contract, the Grumman and GE teams will continue to develop their CASS designs. Both designs will be evaluated at a Navy Critical Design Review in December of 1986.

The stakes are high. When production gets underway in 1991, the CASS contract will be worth over $2 billion for a total of 750 systems.

"As you might expect, bidding for CASS has been and will continue to be extremely competitive," says CASS program director Jim Reed.

Navy repair shops rely on ATE for testing electronic "black boxes." ATE automatically diagnose the condition of these devices and the circuit cards inside them by identifying failed components under computer program control.

About 36 percent of Navy aircraft maintenance problems are avionics-related, and a system can be grounded due to the failure of something as small as a $2 component. ATE keep systems on the flight line working correctly, and ensure that faulty equipment is repaired and returned quickly to service.

Today, every time the Navy purchases a new electronic subsystem, it also has to buy ATE. New electronics have led to a proliferation of equally sophisticated ATE. CASS will replace the jumble of existing ATE with one standardized system.

This will cut costs and reduce the space required by current ATE – especially aboard carriers and submarines. Reed estimates that there are more than 5,000 different test programs now being used by the Navy. All totalled, the Navy operates test equipment at 130 test sites worldwide.

CASS's ATE will look like a medium-sized computer console. Grumman's starting point for development is System-X, its technology demonstrator. So far, there are five types of CASS test stations, each handling a broad category of equipment.

"CASS is expected to be able to handle anything new that comes into the fleet, by just upgrading its software," says Reed.

The Navy wants CASS to be deployed by the time the Grumman F-14D and A-6F join the fleet. "Our chances of winning future CASS contracts are excellent," says Reed. "It helps that 60 percent of the deckload on the Navy's aircraft carriers are Grumman aircraft."

Another advantage: the Navy needs CASS to be compatible with as many existing test program sets as possible – and Grumman developed many of those programs. Test program sets are software programs that interface black boxes with ATE.

About 100 Grummanites will work on CASS between now and early '87. They'll occupy a new section of Plant 106 in Melville (L.I.). ■

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A Letter From The Chairman – Back Cover

A Big Wheel. *Spin lathe operator Phil Lasardi leans into his work. Using a Leico spin lathe, he is forming a pressure dome unit for the cabin rear of the Gulfstream III corporate jet. A little leverage goes a long way. The lathe's roller molds sheets of aluminum into structures only .068 of an inch thick.*

Pearson For Sale

On Thursday, August 15, Grumman announced that Pearson Yachts, an operating unit of the Allied Division, is up for sale.

"We are seeking a suitable buyer for the finest production yacht company in the country," said Grumman President George Skurla. "Pearson will continue as a fully operational company until a buyer is found."

Commenting on the reason for the sale, Skurla said, "Grumman's primary business remains military aircraft. Our aerospace business has expanded and now demands even greater capital expenditures for both plant and research and development to retain our competitiveness in this high technology industry."

Acquired by Grumman in 1960, Pearson is located in Portsmouth, Rhode Island, and employs some 350 people. Its annual gross sales now exceed $20 million.

"Grumman is presently considering an offer to purchase from Pearson's own management," said Skurla, "but we won't rule out offers from companies whose business interests could include operating a premier yacht builder with a name that means excellence of design and workmanship."

While the U.S. sailboat market has been down this year, Pearson has managed to make a significant increase in its market share with the introduction of new sailing auxiliaries ranging from 28 feet to 36 feet in length. ■

A 'Good Business Move' For Olson Puts Headquarters In Sturgis, MI

The Allied-Olson Division has finished moving its headquarters to Sturgis, Michigan. Transferring the management team from Long Island to the truck body builder's largest production facility was a good business move, says Allied-Olson President Sam Rozzi.

"The competition in this business is tougher than ever today," says Rozzi. "Having our whole management team here in Sturgis has already begun to help us sharpen our competitive edge."

The move was made as part of an overall reorganization of the Grumman Allied Division. Rozzi, formerly president of Grumman Emergency Products, was named president of the Olson division of Allied. He replaced Norman Reinertsen who became Allied's senior vice president-Vehicles.

By transferring its headquarters to Sturgis, Olson consolidated its engineering and management teams and improved communications among the company's five manufacturing sites.

The move began in mid-February and was completed at the start of the summer. It included transferring all the division's marketing, accounting, order entry, and procurement activities from Melville on Long Island to Sturgis. Today, only an Olson regional sales office remains in New York. Olson's engineering department was already located in Sturgis.

At the Michigan headquarters, the management team has been staffed almost entirely with new people, because a lot of Long Island-based Grummanites chose not to move. A total of 44 new people were hired, including 32 people from the local Sturgis area. Three Grummanites transferred from other Grumman Allied divisions.

"On one hand, we have a lot of people new to Olson and that means that we may lack some experience," says Rozzi. "But the training that the new people received from those who stayed in New York was just terrific."

New hirees and those transferred from other parts of the division took an intense eight-week training course in New York. Since then, it's been front line, on-the-job training for everyone.

Another bonus for having Olson headquartered in Sturgis is the close proximity to Detroit's big auto makers. Ford and General Motors are the primary suppliers of the chassis on which Olson builds its aluminum truck bodies.

"Chassis are the life-blood of this company. Without them we don't have a product to sell," says Rozzi. "Being closer to our major suppliers will improve communication tremendously."

Consolidating management in Sturgis has been advantageous to the four other Olson production sites: Montgomery and Mayfield, Pennsylvania; Sherman, Texas; and Tulare, California.

When plant managers learned of the move, they were a bit apprehensive and expected six months of turmoil, says Rozzi. Instead, the transition has been incredibly smooth. "All the plant managers were here at Sturgis for a meeting recently," says Rozzi. "To the man, they said that there hadn't been a single hitch in operations during the move."

Olson's customers are happy with the move, too. "Now if a problem arises – whether it's something to do with engineering or an order – they can call Sturgis directly," says Rozzi. "And I can reach out and contact whomever I need to solve it right here." ■

Squeaky Clean. *Paint Shop operator Don Bower gives a steaming hot shower to a newly painted United Parcel Service truck built by Allied-Olson at its Sturgis, Michigan plant. Olson, an operating unit of the Allied Division, recently finished moving its headquarters from Long Island to Michigan.*

Clock Busters. *Getting the EADS hardware connected and running right took the talents of the GDS team: (clockwise from L): Ken Reed, Jake Zachary, Dale Robertson, Ken Junin, Mike Tedesco, Bob Zottoli, Lisa Goldring and Sue Frontrier (John Belmont and Joe Walker were not available for the photo).*

Data Systems Beats The Clock, NASA Gets EADS 60-Days Early

Deadlines don't count at Grumman Data Systems when it comes to satisfying customers.

To satisfy the National Aeronautics and Space Administration, GDS knocked two months off the scheduled delivery deadline for the major components of the Engineering Analysis and Display System (EADS – pronounced "eeds").

The NASA contract is valued at $42 million. GDS Program manager John Belmont says that proposed engineering changes could bring that figure closer to $50 million.

GDS now has 10 people installing EADS at the Marshall Space Flight Center in Huntsville, Alabama. "We hope to see that number increase over the life of the contract," says Belmont. During the five-year contract the GDS team will maintain EADS and provide technical and programming support.

"EADS is a state-of-the art engineering and design facility," says Belmont. "It will give NASA engineers the ability to perform simulations, modeling and engineering calculations at a rate that's an order of magnitude faster than they have been able to do with their old Univac system."

The new system features two large-scale IBM mainframes to function as the front end processors and a smaller IBM mainframe to control the network and the system's output. These will channel work to a Cray X-MP supercomputer.

But a better indicator of the size of the system is the number of EADS terminals NASA engineers will have. The contract called for the network to support 1,000 and have the capability to increase that to 1,500. Marshall is already requesting that 1,400 terminals be connected to the network when it becomes operational early next year.

"NASA has been trying to get this type of system for five years," says Belmont. After NASA and GDS signed the contract on April 1st of this year, "They asked us to hurry up on the schedule where we could." So, instead of turning over the major part of the system to NASA in October, NASA will accept it on August 1.

As NASA had requested, it will get about 80 percent of the hardware on that date. In addition to the front-end and support processors, this includes the mass storage system, all of the communication network (RCA has the contract for the installation of the GDS-supplied network), and the image processing subsystem.

"We pushed IBM to make early equipment delivery and they did it," says Belmont. "We had an ambitious schedule."

The Cray is not scheduled for delivery until April, 1986, six months earlier than NASA required in the contract.

EADS represents little that hasn't already been done by GDS systems designers. "What few problems we did encounter had nothing to do with the system," says Belmont. "The toughest part was setting up the facilities – doing the electrical and cooling work, pulling down walls, putting up doors – to get everything ready for the system," says Belmont. ■

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Tachonics' Tiny Product Aims For Big Markets

By the end of 1985, Grumman will enter the competitive field of manufacturing integrated circuits for highly specialized military and commercial uses. Tachonics Corporation, a newly established affiliate of the Electronics Systems Division, will design and manufacture integrated circuits with the chemical compound gallium arsenide.

"Although silicon is the major component in semiconductors and integrated circuits in today's market, there is a growing place and need for gallium arsenide," says Bob Nafis, president of the Electronics Systems Division. "It's not a question of one supplanting the other. It's a question of what's the best material for a particular application."

Nafis estimates that about 50 companies nationwide are experimenting with gallium arsenide, although its commercial use to date has been limited.

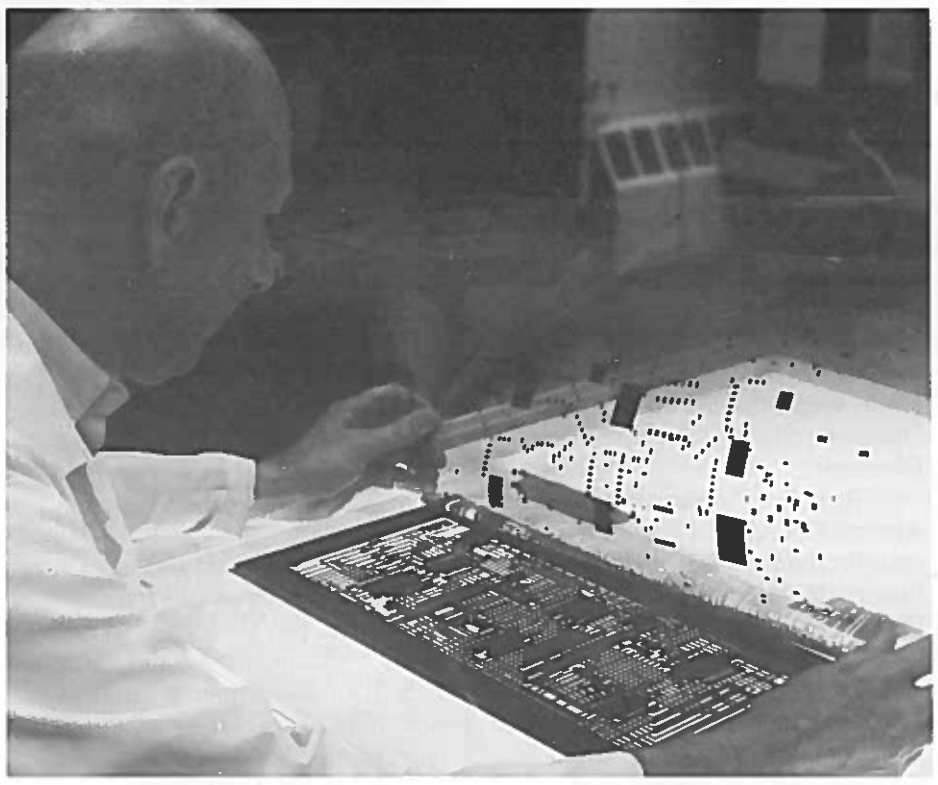
In many applications, gallium arsenide is far superior to silicon, says Nafis. The chemical compound offers a higher speed of operation and can handle higher frequencies. The material is more resistant to radiation – ideal for military uses. Its temperature characteristics are superior to silicon. This is particularly beneficial in high speed electronics, such as next generation computers.

Cray, the super computer firm, is currently designing a high speed computer that will have gallium arsenide microcircuits. The Japanese are thinking of using it in their next generation of digital computers.

In the military market, gallium arsenide is already being used in components for microwave communications, such as radar and electronic countermeasure equipment.

Although there are many advantages to using gallium arsenide, there are also disadvantages. The wafers are more brittle, more difficult to handle, and more costly to process than their silicon counterparts.

But the bottom line is that there is room for both types of circuits in this market, says Nafis.



Microchip Makers. *In Bethpage, electronics technician Jim Laino looks over the artwork pattern for a new high-tech microcircuit. Tachnonics will design and produce integrated circuits for specialized military and commercial uses with the chemical compound gallium arsenide.*

"Of course, usage affects expense," he says. "Gallium arsenide will come down in price as it is used in higher volume. And its development is a full decade behind silicon."

In essence, Grumman is getting in on the ground floor of this relatively new microelectronics field. "Gallium arsenide is a growing and future-oriented technology," notes Nafis. "As producers of the most sophisticated and highly electronic military aircraft in the world, the company sees places where gallium arsenide can produce better circuits in certain applications. What we're hoping to do with Tachonics is make a place for ourselves as a supplier to both industry and Grumman."

Tachonics will bid competitively as a supplier to Grumman along with other gallium arsenide integrated circuit vendors.

Initial plans call for the hiring of about 25 designers and engineers for Tachonics and for locating 30,000 sq. ft. of office and manufacturing space somewhere along the Boston-Washington corridor during the fall of this year. ■

Kurbmaster Offers China Roadside Dining

The Chinese have acquired a yen for southern fried chicken. By fall, curbside diners in Beijing will be able to pick up a fried chicken lunch from a brand-new Grumman Kurbmaster catering truck.

The Allied-Olson Division is currently preparing its third prototype Kurbmaster for shipment to the People's Republic of China. It should leave the United States in early September and be on the streets of Beijing within 60 days.

"China has very few restaurants for its millions of people," says Roger Carson, director of Commercial Products for Grumman International. "The hot-truck is a perfect way to reach the country's large market of factory and office workers."

Three Kurbmasters, outfitted with cooking equipment, are being supplied to Huadu, a Chinese chicken processing company. They will be used as portable, roadside restaurants, serving a newly-acquired Chinese delicacy – fried chicken.

"Capacity is critical," says Carson. "Our trucks must be able to serve up to 1,500 meals per day."

Grumman entered the Chinese hot-catering truck market last year via the giant Japanese trading firm of C. Itoh. "C. Itoh has been very helpful in our efforts in the Far East market," says Carson. Most Far East companies conduct business with other countries through trade companies. Last year, C. Itoh helped bring Grumman and Isuzu together to market a Kurbmaster body with a Isuzu chassis in Japan.

Grumman International is also working with C. Itoh to enter the Korean marketplace. Plans are underway for Kurbmasters to be outfitted with remote television monitoring and recording equipment – specifically for filming of the Olympicas and pre-Olympic events in Korea which begin in 1986. ■

A Beijing Welcome. *The Grumman Kurbmaster catering truck debuts this fall in Beijing, China. It will be used by Huada, a chicken processing company, to serve a new Chinese favorite – fried chicken – to city workers.*

Ghosh Appointed Tachonics President

Tachonics' first president is Dr. Chuni Ghosh.

"He is an experienced executive in the gallium arsenide field – the technology of the future in the electronics world," says Bob Nafis, president of the Electronics Systems Division. "He will play a big role in pioneering Tachonics and Grumman's manufacturing efforts in this exciting new area."

Chuni Ghosh

Ghosh was previously department manager for the gallium arsenide fabrication facility of ITT's Gallium Arsenide Technology Center in Roanoke, Virginia. From 1979-80, he was a research associate in the Physics Department of Oregon State University. In the Seventies, he worked in the opto-electronic division of the Bhabha Atomic Research Center, a leading research center in India.

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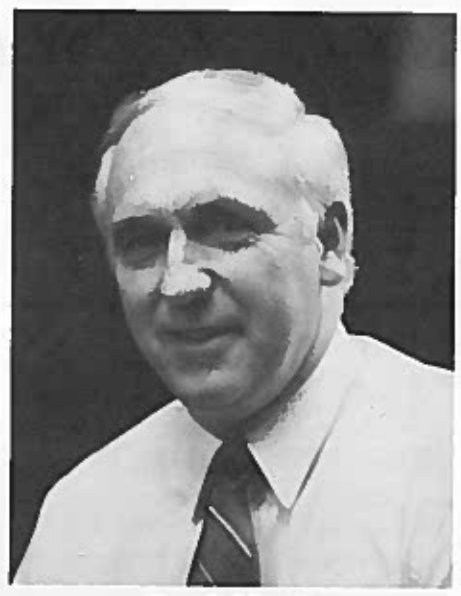
Grumman Appoints 19 Division Officers

The restructuring of Grumman Corporation continues to evolve. In mid-July, the board of directors appointed the following 19 people to new posts as division officers.



Don Schlegel

Will Bischoff

Aerostructures

Don Schlegel has been named vice president and deputy director of the Aerostructures Division.

Aerostructures includes the company's subcontract work on the Boeing 767 wing and 757 spoilers; the V-22 (JVX) empennage; nacelle and thrust reversers; subcontract aerostructure programs such as the CH-53E helicopter, MX and Penguin missiles, and the Space Shuttle external tank; special programs such as the S-2 modification jobs, the Shuttle Trainer Aircraft, and the advanced composite wing and vertical tail program.

Schlegel began his Grumman career in 1965 with the launch operations planning group on the Lunar Module Program. In 1970, he became assistant program manager. Schlegel then worked two years in the Space Systems special projects area and was appointed program manager of the Space Shuttle in 1975.

In 1979, Schlegel was named program manager of the Boeing 767 commercial airplane subcontract. Three years later, he was appointed director of Boeing Programs.

He reports to Division President Tom McGrath.

Aircraft Systems

Seven men have been appointed division officers in Aircraft Systems.

This Grumman division is in the military aircraft and aircraft systems business. It is involved in the development of appropriate new business opportunities, operations analysis, preliminary design, and development, the management of advanced and production programs. Its major operational elements include engineering, manufacturing, testing and product support. It also functions as both a prime systems contractor and a major subcontractor in teaming arrangements.

Will Bischoff has been appointed senior vice president of Technical Operations for the Aircraft Systems Division.

Technical Operations includes Aircraft Operational Analysis, Aircraft Preliminary Design, Advanced Electronic Warfare, Engineering, Flight Test and Technology Development.

The new senior vice president began his Grumman career in 1948 as an engineering craftsman. Bischoff did extensive work on the Lunar Module; he was project engineer for the LM's preliminary design. He went on to become vehicle design subsystem engineer, design engineering manager, and assistant project director for Engineering.

In 1973, he was named engineering manager for the Space Shuttle wing program. Two years later, he became director of Design Engineering for Grumman Aerospace. In 1981, Bischoff was appointed director of Grumman Aerospace's Engineering department. A short time later, he was elected vice president and chief engineer.

Jim Bourne has been named vice president of Business Operations for Aircraft Systems.

For the past decade, Bourne had been director of Contracts for Grumman Aerospace. Since 1983, he had also been deputy director of Business Operations.

Bourne began his career at Grumman in 1966 as a business manager on the Lunar Module program. He went on to become the LM Contracts manager inthe late 1960s.

Jack Christiansen has been appointed vice president of Field Operations. He had been director of Field Operations for Grumman Aerospace since 1979.

Christiansen joined Grumman Aerospace in 1976 as an assistant to the president after a distinguished U.S. Navy career which began in 1941.

During his naval service, Christiansen commanded two fighter squadrons, two air wings and two ships, including the aircraft carrier U.S.S. Constellation. When he retired in 1970, he was a rear admiral and assistant deputy chief of Naval Operations for Air Warfare.

Mike Ciminera has been named vice president of Advanced Programs for Aircraft Systems.

Advanced Programs includes the efforts underway for the X-29, the Advanced Tactical Fighter, and other advanced development programs.

Previously, Ciminera had been director of Advanced Systems Technology since July 1980. In November 1983, he was named head of Grumman's Independent Research and Development effort and chairman of the Corporate Executive Bid Evaluation Board.

Since he joined Grumman in 1959, Ciminera has served in a number of positions in the company's preliminary design and operations analysis efforts. In 1968, he was named assistant to the vice president and project director of the F-14 program. In 1976, he became director of Advanced Aircraft Systems. Four years later, he was appointed deputy director of Advanced Systems Technology.

Bischoff, Bourne, Christiansen, and Ciminera report to Renso Caporali, president of Aircraft Systems Division.

Bill Trillo has been appointed vice president of Calverton Operations. He reports to Phil Vassallo, senior vice president of Product Operations.

Trillo previously had been general manager of Aircraft Systems' huge final assembly and flight test facility at Calverton on Long Island since October 1984.

He joined Grumman in 1952 as a writer in the Service Bulletin Department. He later moved on to posts in System Design and Preliminary Design.

From the late Sixties to mid-Seventies, Trillo worked on the EF-111 and A-6 programs, the latter as program manager and program director. In 1976, he was appointed general manager of Bethpage Operations. Four years later, he was named general manager of the Product Development Operations Center. In 1982, he became deputy general manager of Calverton Operations.

Tom Doyle has been appointed program vice resident of the OV-1 Mohawk. Doyle had been the OV-1 program manager for Grumman Aerospace since 1973. He reports to Pete Oram, senior vice president of Aircraft Programs.

Work on the OV-1 – the Army's battlefield surveillance plane – takes place at Stuart Operations in Florida.

Doyle joined Grumman in 1958 as an equipment lines engineer for the WF-2 and E-2A. He went on to become a cognitive systems engineer for Environmental Control E-2A in 1962. He later became group leader of Environmental Control for the OV-1 Mohawk in 1966 and assistant program manager of the OV-1 in 1969.

Tom Doyle

Dick Kline

Ronald Hale

Tom Kelly

James Bourne

Jack Christiansen

Mike Ciminera

Bill Trillo

Dick Kline, the new program vice president of Space Stations, reports directly to Alex Alexandrovich, vice president of Space Systems. Kline was previously director of Space Station Programs for Grumman Aerospace.

He joined Grumman in 1956 and for the next 10 years was manager of a variety of engineering activities in the thermodynamics, heat transfer, cryogenics and propulsion fields. In 1966, Kline was named program manager of Grumman's Lunar Module Thermal Shield program and went on to become NASA's technical manager of the LM Manned System Test Program atJohnson Spae Center (Texas).

From 1976 to 1977, Kline served as program manager on the systems analysis program study performed for NASA. For the last eight years, he has been manager of Grumman's Space Program organization.

Allied-Olson

Ronald Hale has been appointed vice president of Marketing for Olson, an operating unit of Grumman Allied Division. Allied is in the specialty vehicle and marine recreational businesses. The three other operating units of Allied are the Boat Division, the Pearson Division, and the Emergency Products Division.

Hale joined Grumman in April of this year after 22 years at the International Harvester Company. In 1984, he was named director of Dealer Services. He had previously been director of Sales for the agriculture equipment company.

Previous marketing assignments included general sales manager for the Central U.S., manager of the Albany (N.Y.) and Kansas City regions; and district manager for Columbus, Ohio.

Hale reports to Sam Rozzi, president of Grumman Olson.

Data Systems

Two Grummanites were named division officers of Data Systems.

Data Systems designs, develops, installs and maintains computerized systems. It also provides computer-related services to the rest of Grumman Corporation as well as customers in government, commerce and industry.

Tom Kelly was appointed vice president of Information Resources management.

In 1946, he won a Grumman Engineering Scholarship and began working with the company during his college summers. Upon graduating from Cornell University, he became a propulsion engineer on the Rigel Missile Program.

Kelly returned to Grumman after serving in the Air Force in 1959. In the early Sixties, his concepts and designs in mechanical and propulsion helped shape the plans of NASA's Lunar Module Program. NASA officials refer to him as "Mr. LM" and "the father of the LM."

He was elected a vice president of Grumman Aerospace in 1971. During the Seventies, he headed up Space Programs, Engineering, and Information Resource Management for the aerospace subsidiary. He is currently leading the company's efforts to win the Space Transportation System Operations Contract (STSOC) at NASA's Johnson Space Center in Houston, Texas.

Joe DiGiacomo was appointed the controller of the Data Systems Division. He continues to serve as treasurer of Grumman Data Systems.

He was named assistant treasurer of GDS in 1977, and two years later, appointed treasurer.

DiGiacomo joined the company as a contract cost analyst with Grumman Aerospace in 1963. He became a senior accountant with Grumman Data Systems when that unit was formed in 1970. Two years later he was named director of Accounting.

Both he and Kelly report to Data Systems President John O'Brien.

Electronics Systems

Three people have been appointed division officers in Electronics Systems.

This division develops and manufactures high-tech components, equipment, and systems in a number of electronic fields. Those fields include industrial products, test equipment, microwave and component products, guided weapons and display/training products. In addition, Electronics Systems provides services and support to the other Grumman divisions.

John Keenan has been named vice president of Technology for the Electronics Systems Division.

Throughout his 22-year career at Grumman, Keenan has been involved in automated test equipment (ATE). In the early part of his career, he worked on various designs for ATE and associated software for the E-2C and EA-6B programs.

From 1969 to 1972, he served as F-14A integrated logistics support (ILS) engineering manager. In 1972, he worked in engineering management for the CAT-family of ATE and other advanced development activities. Four years later, he was named ATE program manager.

From 1981 to 1985, he was deputy director of ILS Engineering, responsible for the design and development of electronic support equipment.

Ed Stroud has been named vice president of Test Equipment Products. He joined Grumman in 1964 as an electronics engineer in Integrated Logistic Support (ILS), working on the F-111B and later EA-6B support programs.

In 1970, he became manager of the F-14A/E-2C VAST (Versatile Avionic Shop Test) Operations group—the primary company interface between the Navy and the VAST prime contractor.

Three years later, he was named F-14A ILS engineering manager. In 1977, he became ILS engineering project manager. Between 1978 and 1980, he was responsible for all EF-111A support as EF-111A ILS program manager.

In 1981, he was appointed program manager for the ILS department's Automated Test Equipment Systems, which has now become the Test Equipment Products business unit in the new Electronics Systems Division.

Gary Symansky has been appointed controller of Electronics Systems.

A certified public accountant, Symansky started his Grumman career in 1981 after working at Peat Marwick Mitchell and Company for five years. He worked on the Grumman Aerospace Treasurer's Staff from

(Continued on page 6)

Joe DiGiacomo

John Keenan

Ed Stroud

Gary Symansky

Marty Dandridge

Frank Leone

Frank Rizzo

Wiley Williams

Name New Division Officers

(Continued from page 5)

1981-82. During the past three years, he served as manager of Financial Reporting for the Treasurer's Staff.

Keenan, Stroud and Symansky report to Bob Nafis, president of Electronics Systems.

St. Augustine

Three Grummanites have been appointed officers in St. Augustine Division. This Florida division specializes in the modification, overhaul and maintenance of Grumman and non-company aircraft.

Marty Dandridge is the new vice president of Programs and Business at St. Augustine. He joined Grumman in 1968 as an instructor in the Product Support Department for the Lunar Module Program. He later headed up the F-14 Armament Training Project.

In 1972, he moved into Contracts Management on the E-2C program; five years later, he became E-2C Business Operations manager. In 1979, he was named deputy director of Operations for the E-2/C-2 programs.

The following year he relocated to St. Augustine to become director of Administration and Resources. In late 1982, he was appointed managing director of the Malaysian A-4 program. Two years later, his responsibilities expanded to include Business Operations and Program Development at St. Augustine.

Frank Leone has been appointed vice president of Operations for the St. Augustine Division. In 1944, he started his Grumman career as a structural assembly mechanic on the F6. For the next 25 years, he worked his way up the ranks, from leadman to supervisor to final assembly project manager for the F-14A in 1969.

For the next six years, he continued to hold F-14A managerial production posts at Calverton. By 1975, he was Plant 6 manager. From 1976 to 1981, he was director of Plant Operations for Bethpage Operations, and in 1982, he was appointed deputy general manager of Bethpage Operations.

The next year he relocated to St. Augustine to become director of St. Augustine Operations.

Frank Rizzo has been named controller of St. Augustine. He joined Grumman in 1966 as financial manager for Lunar Module Subcontract Management.

Two years later, he became accounting manager for the entire LM program. From 1970-73, he served as staff assistant to the director of Accounting for Grumman Aerospace. For the next seven years, he was manager of Corporate Financial Projects for Grumman Corporation.

In 1980, he relocated to St. Augustine to head up the accounting and financial activities for the division, in addition to directing the Data Processing department.

All three men report to Joe Walter, St. Augustine Division president.

Technical Services

In Technical Services, *Wiley Williams* has been appointed vice president and Shuttle Processing Contract project director. He reports to division president Fred Haise.

This division services, overhauls, maintains, repairs and tests aircraft, marine and space vehicles and their support systems. At present, its major contract is Space Shuttle Processing at the Kennedy Space Center in Florida, and at Vandenberg Air Force Base in California.

For the past 20 years, Williams has managed aerospace programs and major organizations for both industry and NASA. From 1960 to 1964, he worked in various supervisory positions for NASA at the Kennedy Space Center (KSC), Florida. For the next three years, he was Gemini Program Manager for NASA at KSC. From 1967 to 1972, he worked for Grumman as director of Lunar Module Operations.

He returned to NASA in 1973 to become deputy Shuttle Program manager at KSC. From 1981 to 1984, he was director of Shuttle Cargo Operations. Upon his retirement from NASA earlier this year, he was acting director of Cargo Management and director of Shuttle Cargo Operations for KSC. He returned to Grumman this year as Technical Services' director of Shuttle Processing.

Services

Jake Bussolini has been appointed vice president of Business Operations for Grumman Services Division.

This division provides commonly used services to the other divisions within the Grumman Corporation. Such services include legal, procurement, business operations, security, facilities engineering and maintenance, transportation, and personnel and administrative services.

Bussolini joined Grumman in 1961 as a reliability engineer and eventually became chief of Reliability. Subsequent positions included Engineering Operations manager, director of Administrative Operations, and director of Corporate Estimating Techology.

In 1979, he was named deputy director of Resources and director of Business Operations for Grumman Aerospace. ■

Jake Bussolini

Five Quality Circles Honored For Teamwork

Fifty-three Grummanites received high praise for their hard work and dedication in five quality circles at the Quality Circle Recognition Ceremonies, held this month on Long Island.

At the August 8 presentation in Bethpage, Dan Knowles, vice president-Personnel and Administration, said the whole concept of quality circles is based on involvement and communication.

"No amount of management support can guarantee the success of a quality circle. That is entirely up to the individuals in the group," said Knowles. "If people communicate, cooperate and concentrate their efforts they can accomplish incredible things."

In Bethpage, achievement awards went to members of the "Rap-A-Rounds" in Product Training; "Planners Engaged In Productivity," in Planning Control and Budgets; and "The CenteRing," in Methods Planning.

On August 6, Roy Montana, deputy general manager-Calverton Operations, presented awards to two quality circles: "Circle M Team" of Methods Planning and "Calibration Masters" from Measurement Standards.

"The idea of a quality circle is get people together to talk about problems and solutions. If the people involved don't work together then it can deteriorate into nothing more than a gripe session," said Montana. "Successful groups, like those receiving awards here, have learned to channel their energies towards useful and attainable goals."

Those receiving awards were:

Rap-A-Rounds - Jim Kennedy, Pat Ullrich, Bill Burruso, Rupert Bentley, Bill Cooke, John Gerlich, George Graf, George Keefe, Bob Leahy, Doug MacArthur, John Soucheck, and Ed Walch.

Planners Engaged 'n Productivity - Ray Muntz, Art Filete, Bill Rooney, Carmen Barbato, John Vaughn, Lucille Viola, and Emarie Hewitt.

CenteRing - Bill Raynor, Kal Pogoloff, Harvey Beringhause, Rich Fossing, Charles Gosline, Jr., Joe Montello, Dave Orber, Tony Pedecini, Al Reddick, Tony Reimer, and Marge Tangle.

Circle M Team - Hank Lehnfeld, Debra Weaver, Peter King, Charlie Baldwin, Edward Barty, Russ Jones, Ted Kuhn, Ron Loffredo, Arthur Novack, Nancy Sellgren, and John Tartaro.

Calibration Masters - Bill Kotzky, Jim Meagher, Al Seward, Joseph Bolze, Robert DeSolms, John Fagan, Fritz Freiwirth, Timothy Haas, James Martinsen, Louis Pizzanelli, Frank Posillico, and Peter Schultz. ■

QC Info

Interested in starting a quality circle in your area? For information and assistance, contact the Quality of Work Life office in Grumman Headquarters. Ask for Joyce Sparling or Peggy Cassens at (516) 575-1819.

Travelers Companies Log On With ISI

To tackle the maze of Massachusetts' auto insurance rules, The Travelers Companies has enlisted the services of ISI Systems.

The Boston offices of Travelers will use ISI's computerized Massachusetts Automobile Insurance System (MAIS) services to stay up-to-date on insurance rate and rule changes.

ISI, an operating unit of Grumman Data Systems, will provide automated processing for the insurance giant. Travelers will join about 50 other companies that now use MAIS to process personal automobile policies for their customers in Massachusetts.

Companies without such a system can take months to institute the extremely complex annual changes in the Massachusetts auto insurance codes.. According to ISI's Karen Kubec, this can cost them nearly $90,000 a month for every 20,000 policies they sell. "Their agents are still writing new policies on last year's rates," says Kubec.

Founded in 1969, ISI developed MAIS to develop an automated system to quickly make these changes, as well as offer policy writing and record keeping services.

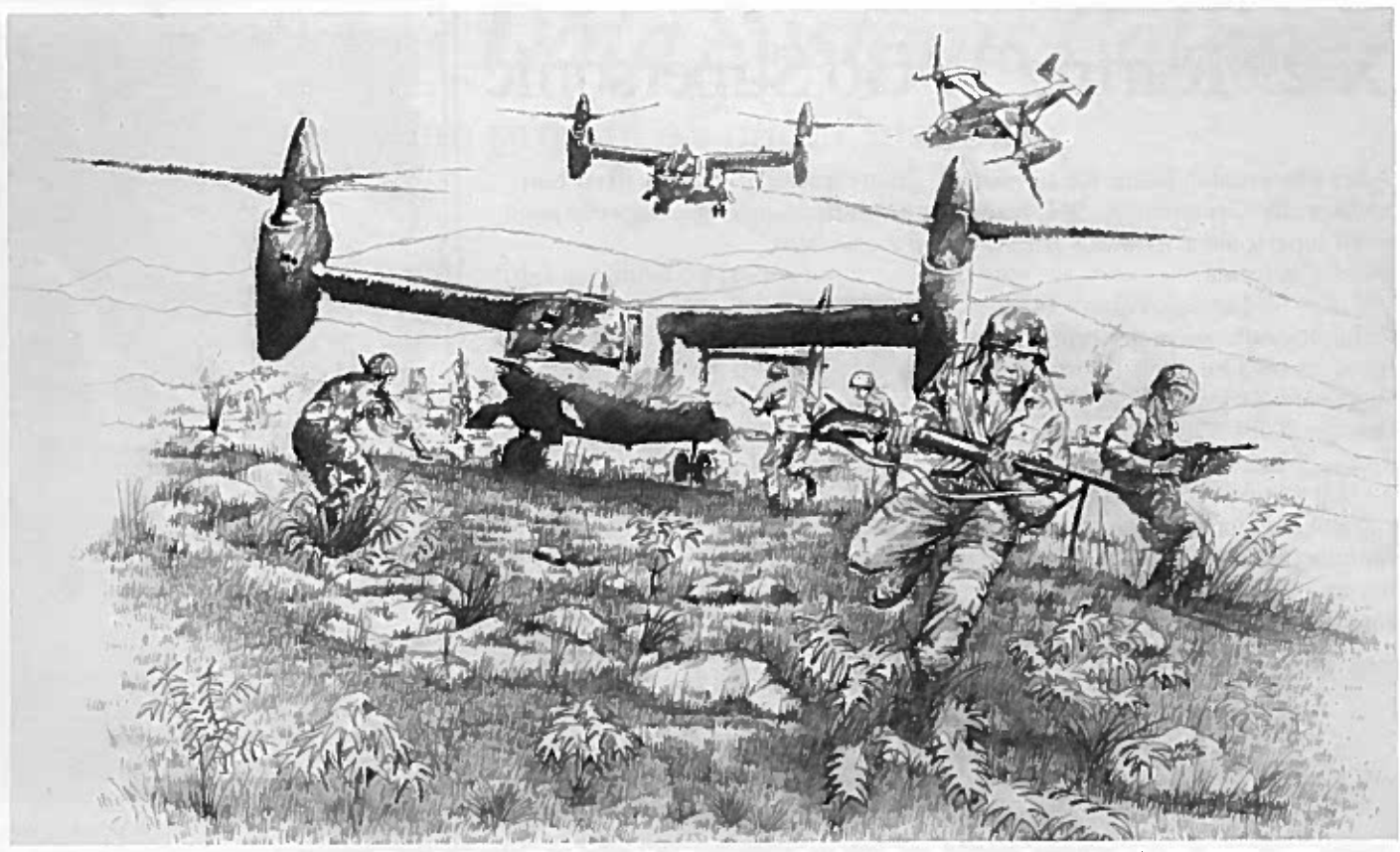
ISI tracks the changes and puts them into its own computers shortly after Massachusetts issues them on *January 1 of each year.* ■

Retirees

On behalf of our fellow workers, *Grumman World* salutes the following Grummanites for their contributions to the company and wishes them well in their retirement.. Those who recently retired are:

Milton C. Danielsen (30), Anthony D. Petrino (2), Sophie S. Teresko (GHQ), William J. Kowalesky (56), Oliver J. Stifler (56), Walter Petruck (52), Charles Bennett (40), Martin E. Susa (2), Edgar Truckenbrodt (18), Douglas C. Warnell (44), John F. Winther (17), Eugene F. Young (43), Jerome C. Zajic (43), Thomas DiBenedetto (3), Charles R. Divan (2), Florence Falco (3), Philip H. Musa (1), George Melchione (12), Walter Bastedo, Jr. (7), Anthony L. Carminati (17), Harry Cocheles (3), George S. Cooper (25), Carlos R. Emers (2), Erwin K. Giesemann, Jr. (30), Alfred A. Goldberg (46), John J. Harriman (35), William R. Hudek (77), William E. Cobey, Jr. (9) George W. Jordan (1), John R. King (77), Joseph M. Mahoney (2), Carl Maroth (2), William C. May (18), Lucille E. Miller (15), Richard A. Percy (2), James E. Randall (5), Frederick M. Rupply (9), Donald F. Ryan (24).

Maria N. Baumann (77), Virginia Galasieski (4), Dominick Guzzo (1), Clarence L. Haynes (25), Anne M. Parker (4), Vincent H. Radziminski (30), Ralph I. Rosenfeld (9), Honorable W. Russell (15), William Sneider (40), Henry J. Vroom (35), Mary Cardoza (111), Andrew N. Quattrocchi (6), Jill A. Lamoureux (25), Charles Palmieri Jr. (43), Donald H. Schulte (6), David Alleavitch (43), Mary Devaney (44), Ib G. Hansen (6), John A. Vollario (14), Carmine S. Auletta (3) Robert B. Barnes (3), Curtis H. Dolderer (18), Joseph A. Kerwin (5), Joseph Lovrecich (106), Salvatore Tedesco (21) Richard L. Nemec (12), Walter Petruck (52), Bernard J. Picone (77), John A. Carr (17), Henry Kochany (2), Stefan Kikta (2), John F. Nolan (2), Richard A. Fischetto (71), James F. McConville (7), Edward J. Curtis (40), Dewitt B. Blossom (37), James H. Clarke (3), Viola M. Law (43).



Versatile V-22. *The V-22 Osprey offers the best of both worlds. Constructed primarily of composite materials, the V-22 will hover like a helicopter and fly like an airplane. Grumman is designing the empennage – tail section – for the Bell/Boeing team's Osprey.*

V-22 Osprey: Flexible Flyer

Grumman designing tail section for new composite TiltRotor plane

The day of an all-composite aircraft that soars like an airplane and hovers like a helicopter is getting closer.

Grumman is part of the Bell Helicopter Textron/Boeing Vertol team that is building the TiltRotor Joint Services Vertical Takeoff and Landing Experimental (JVX) craft, named the V-22 Osprey.

The first phase, Preliminary Design, is now winding down as Grumman begins delivering the engineering drawings this month. The next phase, Full Scale Development (FSD), will start later this year. The V-22 subcontract which ends in November 1987 will amount to about $21 million in business for the Aerostructure Division.

The Aerostructures Division is designing the aircraft's empennage. This tail section includes the horizontal stabilizer, elevator, two vertical stabilizers and rudders. Under a recent contract change, Grumman will also provide a section of aft fuselage directly in front of the empennage.

"Grumman stands to gain considerable benefits both in production experience and technology development," says Tom McGrath, Aerostructures president. "We expect to use these benefits in future designs for military and commercial applications."

"While we're not doing anything on the empennage that we haven't done before with composites," states Bill Brown, Grumman's V-22 program manager, "this certainly is a complex structure. Nearly all the parts are made of graphite/epoxy."

About the only metal pieces in the 18-foot-wide, 10-foot-high empennage are the control surface hinges and fasteners. Most of the other structural sections, including the fuselage, floors, cargo bay door, and wing, will be made of composite materials. In fact, the V-22 will be the first production VTOL TiltRotor and the largest all-composite aircraft in the world.

The FSD contract calls for Grumman to build nine empennages. One will be for fatigue tests, one static tests, one for drop tests, and six for the flight test aircraft.

The composite parts for the nine units will be produced in Milledgeville, Georgia, and assembled in Stuart, Florida.

Twenty-six people are now working in Melville (L.I.) on preliminary design. Another 20 in Melville, 30 in Milledgeville and 14 in Stuart will join the FSD effort. "The manpower requirements do not call for additional hiring for FSD," he says. "But if Grumman eventually wins the production contract, it will have an effect on manpower."

The military plans an initial buy of 913 TiltRotors. Bell/Boeing expects that number to increase and also predicts a large potential commercial market for the TiltRotor after it enters the military inventory.

The Osprey will be used in all the military branches. The Marine Corps will receive over 500 Ospreys to carry troops to beachheads from ships far off shore.

The Navy plans to use its 131 V-22s for anti-submarine warfare and search-and-rescue operations.

The Army will get more than 200 for utility/medivac and other missions, while the Air Force will use their 80 V-22s for search-and-rescue and special operations.

The V-22 is being designed to protect the crew during nuclear, biological and chemical (NBC) warfare. In addition, soldiers in full NBC gear – which is a suit akin to a space suit – must be able to decontaminate the V-22 inside and out in the field. "We will co-cure [the bonding of separate composite components] as much of the structure as possible in order to minimize the number of fasteners," says Brown. "This reduces weight, and also reduces the number of the places contaminants can enter."

The Osprey is also the first aircraft being developed under new Department of Defense guidelines for competitive acquisitions. These require competition at every possible level to keep costs low. "In fact, Bell and Boeing may eventually be competing against each other. Even under full scale development of the flight articles, the work is split," says Brown. "Boeing will do final assembly of three aircraft, as will Bell, to demonstrate that they can independently deliver aircraft to government specifications." ■

Milledgeville Earns Praise From Boeing

The Boeing Company has cited Milledgeville Operations (Ga.) for outstanding performance on the Boeing 757 subcontract program.

The Boeing award is for the co-cure method Milledgeville Operations developed for making composite Boeing 757 spoilers. Aerostructures program manager for the 757, Bill Brown, also received Boeing's Certificate of Outstanding Performance.

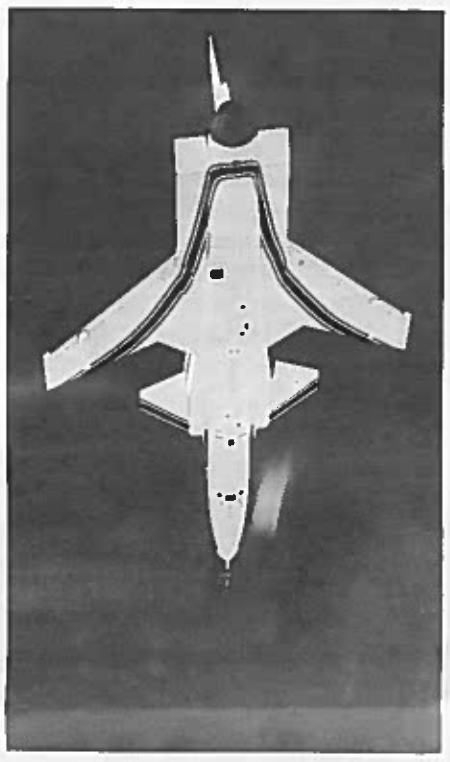
"Co-curing is an existing technique developed specifically for aircraft spoilers," says Brown. "We demonstrated to our satisfaction that it could be done on the Boeing 757 program, and convinced Boeing that it was a cost reduction move." According to Brown, the potential savings from using the method are $1 million each for Grumman and Boeing. ■

X-29 Raring To Go Supersonic

After a two month hiatus for software updates, the Grumman X-29 is ready to go supersonic at Edwards Air Force Base, California.

On Wednesday, August 14, the technology demonstrator returned to the skies over Edwards for its 17th test flight. NASA test pilot Rogers Smith flew the X-29 at its fastest speed to date – .7 Mach – at an altitude of 30,000 feet.

"All the information we have so far indicates that the X-29 is performing well beyond our expectations," says Glenn Spacht, X-29 deputy program director. "We hope to sustain that performance level as we expand the envelope."



Up to speed. *The X-29 has undergone flight control system modifications that will enable it to be flown at supersonic speed. Recently, the aircraft was flown at .7 Mach – it's fastest to date.*

For the past two months at Edwards, a Grumman team of technical personnel made flight control system modifications to the X-plane's back-up analog computers. The work, called Expanded Envelope Modifications, included the addition of new software.

The analog computer system is designed as a back-up to the three on-board digital computers that make up the X-29's fly-by-wire system. In the unlikely event of a computer failure in at least two of the digital systems, the aircraft would revert to the analog system.

The old analog system was designed to control the X-29 only up to .6 Mach. The new modifications will enable the aircraft to go supersonic.

Spacht says the earlier tests have shown how well all the new technologies in the X-29 function. The next milestone will be to take the aircraft to .9 Mach at 30,000 feet for what is called the transonic maneuver design point. Transonic speed is the typical level at which fighters perform most of their combat maneuvers.

"That's when we will really see how well the forward swept wings perform," says Spacht. "We want to test the X-29's fighter technology capabilities at the transonic level, then we will go for supersonic."

The X-29 is scheduled to break the sound barrier sometime near the end of September. After that, test pilots will push the aircraft to even higher speeds at lower altitudes to test drag and maneuverability. ■

A Brief High Tech Tour. On Wednesday, August 7, Amoretta Hoeber, Deputy Undersecretary of the Army for Strategic Defense Initiatives (SDI), visited Grumman on Long Island. While in Bethpage, she was briefed by top company officials on Grumman's SDI efforts. She capped off her visit with a tour of Calverton. Grumman Chief Test Pilot Chuck Sewell (above L) talked about the Navy's air superiority fighter as Hoeber sat in the front seat of an brand-new Tomcat in Plant 7.

R&D Trims Quarterly Profits

On July 31, Grumman Corporation reported net income of $22.8 million or 75 cents per share on sales of $732.5 million for the second quarter of 1985. For the same period in 1984, sales were $609.9 million and net income was $25.2 million or 84 cents per share.

"The six months' results are a bit under what we expected," said Grumman Chairman Jack Bierwirth. "However, we announced previously that our 1985 earnings will be lower than originally estimated, and for sound reasons.

"We will continue to invest our research and development capabilities and resources in those competitive opportunities that we believe we can win, and which will insure our future growth," continued Bierwirth.

In the second quarter of 1985, aerospace sales increased $110 million and operating profits rose $3.4 million. Approximately $52 million of the sales increase was attributed to the F-14D and A-6F upgrade development programs being performed at no profit. Interest expense increased $5.6 million over last year's second quarter.

For the six months ending June 30, 1985, net income amounted to $50 million or $1.65 per share, compared to $50.5 million or $1.69 per share in 1984. Sales totalling $1.5 billion increased 24 percent over the previous year.

Aerospace sales rose approximately $270 million or 25 percent during the first six months of 1985, of which $102 million was for the F-14D and A-6F development. Sales were also higher as a result of the initial production and delivery of C-2A Greyhounds. Aerospace operating profits increased about $8.6 million or 12 percent in the six month period, even after substantial expenditures for various research-and-development programs.

Sales and profits were also higher in the non-aerospace activities, as a result of increased sales of data systems services and better sales and performance in the aluminum truck body business.

Consolidated interest costs for the first six months of the current year amounted to $15.4 million, an increase of $11.5 million over the same period in 1984, as a result of increased borrowings. ■

Grumman Awards Dollars To Mfg. Scholars

Seven people – including two Grummanites – have been named recipients of 1985 Manufacturing Engineering/Technology Scholarships.

Grumman provides these scholarships to give interested students an opportunity to pursue their bachelor's degree in manufacturing engineering/technology while they gain industrial experience.

The scholarship program is open to individuals who have completed the first two years of a mechanical engineering curriculum, or who have a two-year associates degree in manufacturing or mechanical technology.

Each scholar will be given $4,500 a year for schooling as well as being offered a full-time job upon graduation.

Since the program started in 1980, the number of scholarships awarded annually has increased from one in 1980 to seven this year. "The board of directors felt that the quality of students was such that it warranted an increase," says Fred Neuscheler, supervisor of Manufacturing Administration and the administrator of the program.

The 1985 winners were chosen from among 25 applicants. All hold associate degrees from SUNY-Farmingdale and will study for their bachelors degree in manufacturing engineering technology. This year's scholarship winners and the schools they will attend are:

Timothy Clare, SUNY-Farmingdale.

Keith Comer, Arizona State University.

Terresa Daniels, New Jersey Institute of Technology.

Russell Gehrt, Rochester Institute of Technology.

Joan Marotta, SUNY-Farmingdale.

Thomas Quinn Jr., Rochester Institute of Technology.

William Rice Jr., Arizona State University.

Both Clare and Rice are full-time Grummanites who currently work in Manufacturing Forming Process Engineering in Bethpage. ■

Class of '85. *Congratulations to this year's Manufacturing Enineering/Technology Scholars: (from 2nd L) Terresa Daniels, Keith Comer, Thomas Quinn, William Rice, Russell Gehrt, Joan Marotta, and Timothy Clare. They are flanked by (far L) Bill Lamberta, general manager, Manufacturing Technology Operations, and (background) Herb Grossman, vice president, Bethpage Operations.*

Hello, Saskatchewan? Data Systems Calling

GDS software will help run this Canadian province's phone company

Area code 306 covers an area almost as big as Texas but with fewer than a million people. The place: Saskatchewan, the province that occupies the heart of the Canadian farm belt.

Recently, the Saskatchewan Telecommunications Company became the first licensee of Grumman Data Systems' TELFACS software. TELFACS stands for Telephone Equipment and Loop Facilities Assignment Center System.

GDS is modifying it to Saskatchewan Telecommunications' specifications. In September, one or two Grummanites will travel to Regina, the capital city of the province, to install the system and conduct training. GDS will be under contract for additional TELFACS-related custom software development extending through 1986.

Accurate records mean more accurate problem solving by phone companies

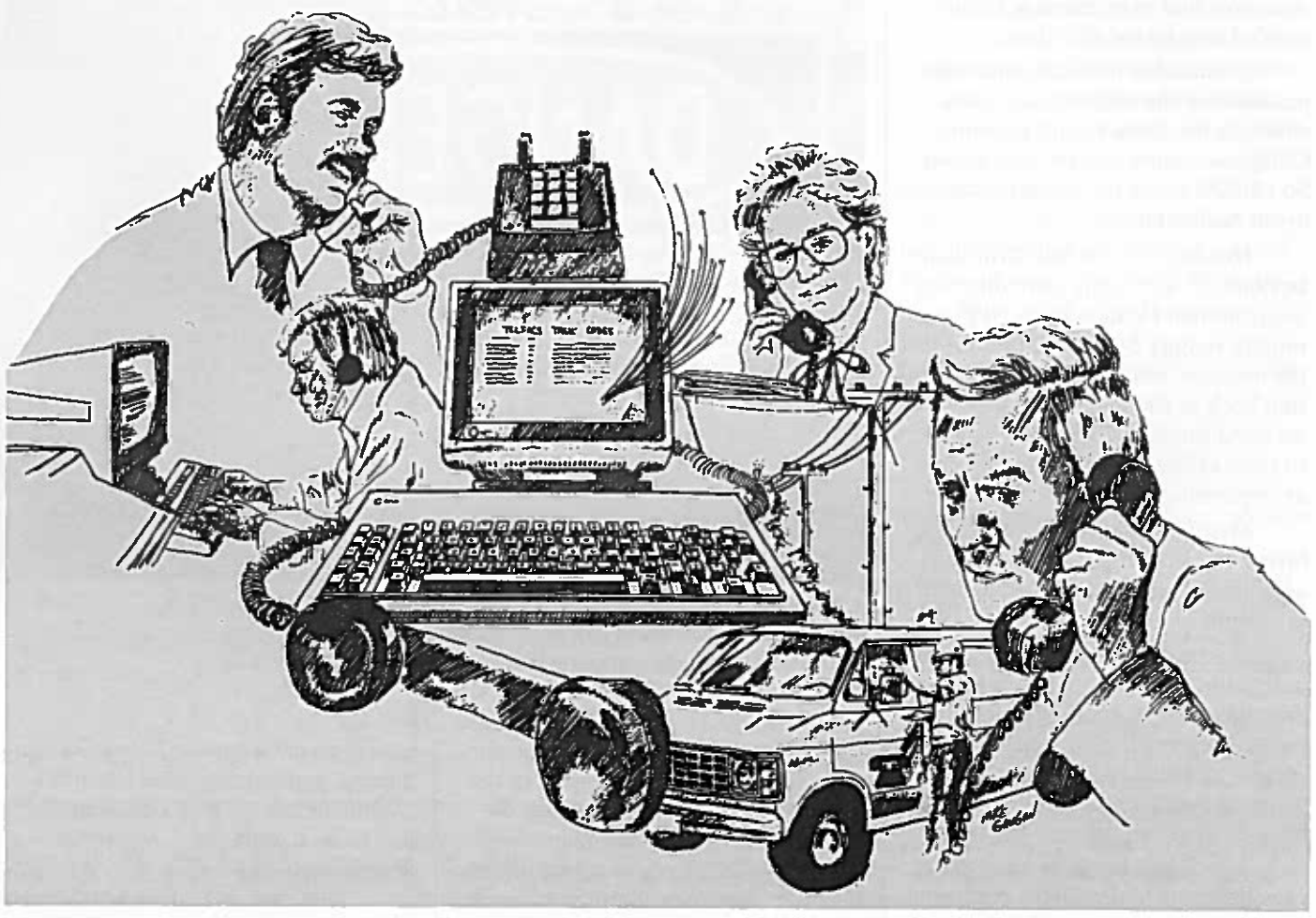
TELFACS is an information management software system that keeps computerized records of a telephone company's facilities. Multiple manual records are replaced by one *on-line database. It runs on IBM* mainframe computers of the "4300" or higher class, or their equivalents. The telephone company benefits in three ways: recordkeeping is more accurate, information is more accessible, and productivity improves as a result.

For the average telephone company, each phone line is backed up by $1,000 of investment in trucks, telephone poles, land, buildings, cables, wires, relays, and a gaggle of other elements. "If you can improve the use of those resoures by even one percent for six months, that's a big dollar savings," says Jon Ayers, director of Telecommunications Projects for Grumman Data Systems.

"TELFACS saves the telephone company money," says Ayers. "Telephone companies have to keep tremendous amounts of records. In most cases, there is a twisted pair of copper wires that runs from your phone, out to the telephone pole, down the street, and eventually through an underground conduit to the central office, where it goes into switching equipment.

"The telephone company must keep track of all that, plus who its customers are, phone numbers, what pair of wires they use, where they are, where they go, what conduits they go through, what terminals they go through, the in-use or out-of-use status of the other wires in those terminals, whether they have party service, and who else is on their party line," continues Ayers.

Other information could include whether a phone line is used for a residence, business, or coin phone; and the services and equipment it has, such as call waiting and call forwarding. TELFACS keeps track of all this data automatically – editing, comparing, rearranging, and retrieving it for any company employee with a computer terminal.



Far-flung assets. *Telephone companies own a vast array of equipment and facilities. And for service purposes, detailed records must be kept on all these items. Thanks to TELFACS, that's no longer a tough assignment.*

When plant records are updated, new data is available instantly throughout the company, eliminating the need for trips and phone calls between departments. TELFACS is also designed to complement other information systems a telephone company uses, such as billing, by enabling data to be shared.

All of this information is vital to keeping the lines humming throughout a telephone company's network. Accurate records mean more accurate problem solving by telephone company personnel. For example, when a problem develops, it is often brought to the telephone company's attention by the customer. Just as often, however, the phone company itself detects the problem before the customer does. TELFACS will augment this trouble-shooting capability.

All 18 of Saskatchewan Telecommunications' central offices will share TELFACS software, but each will maintain its own separate database. The company has 600,000 phone lines. It is a crown corporation – which, in Canada, means it's owned by the provincial government.

"But like any business, it must continually improve its operations," says Ayers. "They want to improve productivity, and that's what this system does."

The records that will be automated through TELFACS are now mostly kept in handwritten log books and tub files, often resulting in duplication. "Studies have shown that with manual records, the best that can be achieved is 75 percent accuracy," Ayers says. "With TELFACS, you can improve that to better than 98 percent."

"In a phone company, an error in a record can mean an error in service," he adds. "And service errors, when added up over a month's time, can be very costly to a phone company. So the system pays for itself quickly." ■

Grumman-Isuzu Kurbmaster To Debut In Tokyo

This coming fall, Japanese in the market to buy a truck will have a new product to consider – Grumman Kurbmasters.

Grumman and Isuzu, a Japanese leading truck builder, are ready to enter the business of large aluminum trucks in Japan. The Allied-Olson Division's Kurbmaster, redesigned for the Japanese market and fitted on Isuzu chassis, will premiere at the Tokyo International Motor Show in early November.

"We can offer Kurbmaster heavy-gauge aluminum kits at a fraction of the cost of Japanese aluminum," says Roger Carson, director of Commercial Products for Grumman International. "Isuzu knows how to build a top quality truck that can handle the tight road conditions that exist in Japan." Japanese truck drivers have to do a lot of stop-and-go driving.

There is a growing demand in Japan for trucks that can carry larger loads. Today, most of the trucks in the country are substantially smaller than the Kurbmasters. The Kurbmaster body being supplied to Isuzu is a smaller model than the Kurbmasters sold in the U.S. Even so, the Japanese version with its 468 cu. ft. capacity is almost twice the size of the average Japanese truck.

For Isuzu, the Kurbmaster endeavor is an opportunity to market its lightweight truck chassis. "There are several Japanese manufacturers in the walk-through van market already," says Phil Belgio, manager of Export Services for Grumman International. "For Isuzu to enter this market, it meant re-inventing the wheel and making their own truck bodies or going with experienced leader in the field – Grumman."

According to Belgio, Japanese trucks are currently made primarily from steel, and the bodies cannot be removed from the chassis.

"In Japan today, when the truck chassis goes, so does the entire truck," says Belgio. "We believe that when the Japanese see a truck body that can last 20 years or better – just by replacing the chassis – they will be convinced that aluminum truck bodies are worth the additional initial expenditure." ■

PINY Reunion

On Wednesday, September 18, the Polytechnic Institute of New York (PINY) will sponsor its first annual Grumman-PINY Alumni picnic at McKay Field in Bethpage. Flyers are now being posted throughout the Grumman plants on Long Island. For more information, contact Leo Esnes Jr., Ext. 51740. ■

No Sweat, Brownout Averted By High Voltage Effort

The announcement came over the P.A. system at 10:45 a.m. on August 15. Emergency power conservation measures had to be taken at Grumman's Long Island facilities.

Unbearable humidity and temperatures in the mid-nineties put a strain on the Long Island Lighting Company's ability to provide power. So LILCO asked its biggest customers to cut back on usage.

Heading the list was Grumman. In Plant 25, the lights were dimmed. In Grumman Headquarters, it grew mighty muggy by late afternoon. But the measure achieved its aim – by cutting back in such areas as lighting and air conditioning, Grumman was able to keep essential production machinery operating.

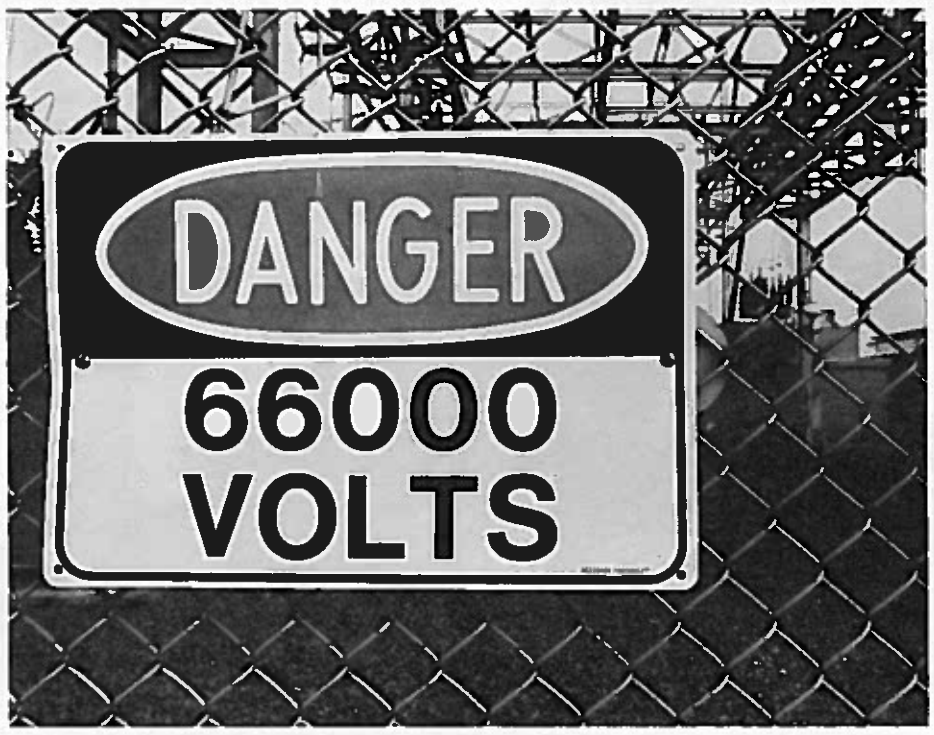
Many Grummanites called it a brownout, but what happened was actually a measure designed to avert a brownout.

In a true brownout, power dips indiscriminately. As temperatures rise into the nineties, more people rely on power-hungry air conditioners. With surging demand, power companies sometimes must reduce voltage output by a small yet significant fraction.

A brownout gets its name from causing lights to dim. This contrasts with a blackout, in which power goes out completely. Actually, a brownout is a last-ditch effort to prevent a blackout.

Home appliances don't work well in brownouts. Industrial machinery and computers hate them.

At Grumman, computers, state-of-the-art shop machinery, lab equipment, and other systems would be adversely affected by a dip in power.



A Jolting Message. *A whopping 66,000 volts are distributed to Bethpage from these transformers located next to Plant 2. New transformers are being added that automatically regulate voltage and can ward off a brownout attack on L.I.*

To cite just one example, in the chem-milling area, electrically powered racks lower metal aircraft parts into caustic chemical solutions. If power decreases, these mechanisms would slow down or halt, and the parts would be ruined.

The Long Island Lighting Company anticipated multiple brownouts this summer, and asked its 500 largest customers to devise emergency conservation plans for the 10 a.m. to 10 p.m. time period, when use is heaviest.

"Emergency load shedding isn't new to us at Grumman," says George Turney, general manager, Facilities Maintenance. "We've occasionally had to do it in the past, and it has always worked well."

"A brownout is usually related to hot weather, but not necessarily," he adds. "If LILCO loses a generator, then there will be a brownout."

There is an intricate, step-by-step procedure when electrical use at Grumman must be reduced quickly.

LILCO's Hicksville facility houses a futuristic room, where instrumentation, computers, and light-up maps provide data on power usage

When an emergency is imminent, this office notifies Grumman's Facilities Maintenance Operations Center in Plant 2. In turn, the Grumman center notifies superintendents at each plant on Long Island. Plant maintenance crews reduce lighting to a predetermined level. They also raise climate controls three to five degrees in all areas but computer rooms.

Superintendents also get the word out to a host of people – foremen, managers, heads of computing facilities, and others – with responsibility for power-consuming machinery. These people must determine what equipment in their areas can be shut down.

"The object is to reduce what they can without curtailing production," says Turney. "They can often do this just by deferring work. For example, loading parts for heat treat. The foreman has to ask himself, can it wait until the night shift, after 10 o'clock, when the emergency period is over?"

Turney notes that some brownout avoidance mechanisms are being built into Grumman's utilities system. A staggering 66,000 volts is distributed to Bethpage alone. Newer transformers are equipped with automatic voltage regulators. These can automatically adjust to minimize the impact of reduced voltage.

"We still have some older transformers that don't have automatic voltage regulation," Turney says. "With those still in place, we'd still have some problems in a brownout. We're in the process of phasing them out, however."

Hopefully, the threat of brownouts in 1985 is history. ■

Greyhound Drivers. *Lt. Susan Freeman (C), the first Navy pilot qualified to fly the reprocurred C-2A, and Lt. Stuart Cummings (L) recently flew into Bethpage to pick up another new C-2A. Welcoming the crew were: Bob Tumilowicz, C-2A flight test manager, and John Stark (R), deputy director-Development.*

Checked Out In New C-2A

Lt. Susan Freeman recently became the first Navy pilot qualified to fly the new C-2A Greyhound. She completed her ground and flight school instruction at the Naval Air Station in Norfolk, Virginia.

Since the mid-60s, Navy pilots have been delivering everything from supplies to the mail in Grumman C-2s to the aircraft carriers. The current training program is designed to recertify pilots on the latest version of the Greyhound. Significant improvements have been made to the new C-2As including all new avionics and more powerful engines.

Grumman Flying 'C' Flag Again

Grumman is flying the 'C' flag again, due to its successful program to train community literacy volunteers.

The flag bears a large "C" and the words "We Can, We Care." It is part of President Reagan's citation program for Private Sector Initiatives, and recognizes corporations for outstanding contributions and volunteer work. Long Island Congressman Robert Mrazek nominated Grumman for the award.

So far, two classes of Grummanites have been trained as reading tutors since the program was launched last September. Eighteen were in the first group, and another 19 graduated in May. Tutors spend two hours a week, for a minimum of one year per student, teaching functionally illiterate adults.

The program is run in conjunction with the Literacy Volunteers of Long Island. Grumman pays for the teaching materials and training is done in a classroom at Bethpage. ■

Teachers Go To School. *So far, 37 Grummanites have volunteered to teach reading to illiterate Long Islanders.*

A Tribute To A Craftsman. *Hans Taube of Display Presentations, Inc., in Farmingdale, puts the finishing touches on the dedication plaque for the new William T. Schwendler Engineering Development Center. Located in Bethpage, the high tech center was dedicated in honor of company founder Bill Schwendler on June 26.*

Insurance Industry Target For New ISI Software Packages

ISI Systems recently introduced two new software products for the insurance industry: The Insurance Writer and Ratabase.

The Insurance Writer helps reduce agent and company costs, eliminate redundant processing, improve account accuracy and increase sales and service. "It is the very efficient and affordable microprocessor-based system," says Charles Johnston, president of ISI Systems Inc, an operating unit of the Data Systems division.

Agents can use The Insurance Writer to rate insurance for private auto and homeowner insurance customers, as well as commercial clients. Agents punch into the computer the coverages a customer needs, and the computer comes up with the premium, right on the spot. Or, agents can work from a target premium and come up with the best possible insurance package for their clients.

The new ISI software system, which went on the market this month, works on IBM personal computers.

ISI is also offering purchasers of The Insurance Writer a purchase/lease program for IBM personal computers and necessary peripheral hardware.

The GDS operating unit plans to demonstrate The Insurance Writer at the annual Independent Insurance Agents of America national convention in Hawaii in September, as well as in a national series of workshops.

Meanwhile, Ratabase, used by ISI for a number of years, is now being marketed to medium-sized insurance companies. Ratabase has two components. One is used on mainframe computers at the insurance company's main offices. The other works on personal computers installed at branch and agent offices.

Ratabase allows the insurance writers to analyze, test and put into operation most insurance rate and rule changes, without calling in computer program writers.

ISI has been offering computer software and on-line services to the insurance industry since 1969. The Braintree, Massachusetts-based company now helps some 150 insurance carriers and 5,000 agencies nationwide. ■

St. Augustine Lands A New Prime Customer: NALC

The St. Augustine Division has won Grumman's first contract with the Naval Aviation Logistics Command (NALC). The $600,000 contract calls for the Florida division to inspect and perform standard depot level maintenance (SDLM) on two TC-4Cs for the U.S. Navy.

Though it is small compared to other major aircraft programs, St. Augustine President Joe Walter hopes the TC-4C contract is start of a long lasting relationship with NALC. St. Augustine is Grumman's dedicated aircraft overhaul and modification work facility, and NALC will award $500 million in aircraft maintenance next year alone.

During SDLM, the aircraft is torn down so that the engine, fuel and electrical systems, as well as the structure, can be inspected and refurbished. Repairs are made as necessary.

The first plane arrived at the Florida facility in June; the second plane is due in October or November. The work, not counting repairs, is worth approximately $600,000. The Navy has options for four one-year contract renewals.

The TC-4C, which first flew in 1967, is a Gulfstream I executive twin turboprop aircraft that Grumman modified for the Navy. Grumman produced nine TC-4Cs, with the last being delivered in June 1968.

The TC-4C's most apparent modification is its nose. Gone is the sleek G-I front end. Instead, the TC-4C has the nose of an A-6 Intruder attack aircraft. That's because the TC-4C is a flying school for A-6 bombadier-navigators (BN).

Inside, the plushy executive seats are gone. In their place, Grumman installed a main station that is nearly identical to an A-6 cockpit and four other stations where BN trainees can follow the work of the student in the main station.

Approximately 10 Grummanites are currently working on the TC-4C at St. Augustine. "We're doing the basic SDLM work now," says production manager Ken Stevenson. "We just finished the 'drop in' maintenance, which includes a complete deicer boot change." Deicer boots are rubber-like coverings that expand to break off ice that may form during flight on the leading edges of the wings and stabilizers.

"The workforce will peak at about 20 people when we do a complete fuel cell corrosion inspection," Stevenson says. "That means the lower wing planks, the engine, and landing gear will have to be removed."

While the TC-4C job is not a major contract in size, it's significant in a number of ways, says Walter. First, St. Augustine had to beat strong competition in a tough business. "People who need aircraft reworked are like people who shop for televisions," says Walter. "They know all the sellers who have quality products, so they shop for the best price."

More importantly, Grumman St. Augustine has established a relationship with a new primary customer. "The TC-4C win enables us to learn all about the NALC's unique contractual requirements and procedures," says Walter.

The NALC will be asking for bids in September for a major Navy A-4 Skyhawk refurbishment contract.

"We hope to put ourselves in a good position to win this," says Walter. "The Navy flies 600 A-4s – virtually the largest number of models in its aircraft inventory. We acquired a wealth of knowledge about this plane from our A-4 modification and overhaul work for the Malaysians. The Grumman St. Augustine Division was designed and dedicated with this kind of rework business in mind." ■

Ready For A Facelift. *In the late Sixties, Grumman converted nine Gulfstream I's into TC-4Cs – flying classrooms for A-6 bombardier/navigators – for the Navy. St. Augustine has won a Naval Aviation Logistics Command contract to perform maintenance on two TC-4Cs.*

Obituaries

Gordon Groenwald, St. Augustine, Plant 265, died June 20 at the age of 49. He had been with the company since 1970, his address was P.O. Box 4486, St. Augustine, Florida.

Erwin Zeiser, Business Operations Management, Plant 5, died July 25 at the age of 63. He had been with the company since 1964 and resided at 254 George St., West Islip, N.Y.

Personals

My family and I wish o thank Grumman ESO, friends and co-workers for their kind expressions of sympathy during the recent loss of my sister. **John Moynihan**

My family and I wish to express our heartfelt appreciation to all my friends, co-workers and Grumman ESO for their thoughtfulness and kindness during my recent illness. **Bill Paul**

I would like to thank all my friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my father. **Clare Vonderschmidt**

My family and I would like to thank Grumman ESO and all my co-workers for their sincere expressions of sympathy during the recent loss of my brother Peter. Your generous donations have been sent to the Sloan-Kettering cancer fund. **John McKinnell**

The family of the late George Buckley extends a depth of gratitude to all his friends for the comfort they gave us during our time of deep sorrow. **Cecelia C. Buckley**

My family and I would like to express our sincere thanks and appreciation to all my friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my wife Elizabeth. **John Nordin**

The family of Raymond C. Fong wishes to express their heartfelt appreciation to Grumman ESO and his Plant 5 co-workers for all the kind words of sympathy, cards and flowers during the recent loss of our mother.
Mr. & Mrs. Raymond C. Fong

Despite Hurricane Bob, Picnic Was No Washout

No Monkeying Around. *At the Annual Grumman Family Picnic, there was plenty of entertainment – from monkeys and clowns to a daring young man on the flying trapeze.*

Though demoted to tropical storm status, Hurricane Bob blew into town on Friday, July 26. His arrival forced the postponement of the 44th Annual Grumman Family Picnic to Sunday, July 28. It was worth the wait.

By Sunday morning, the puddles had disappeared, and the sky turned a deep blue. Over 6,000 members of the Grumman family gathered at the spacious Calverton picnic grounds on Long Island.

"It is a beautiful day and that makes for good spirits and a great picnic," said Grumman Chairman Jack Bierwirth, as he strolled around the picnic grounds with his wife Marion. "I'm impressed to see so many youngsters and young families. Not only that, but many of the people Marion and I met were second and third generation picnickers. I think that speaks well for the tradition of the family picnic."

"The family picnic is a company event that we look forward to every year," said Grumman President George Skurla. "We're all one big family and this is a fine testimony to it."

"At a time when a lot of traditions are dying," added Data Systems President John O'Brien, "it's great to see that something some like the Grumman Family Picnic is alive and strong."

"This is one day I never miss," says Penny Zdziebkowski of Planning and Operations, Plant 30 in Bethpage. Her family was one of the first ones to enter the gates at 8 a.m. "We always get here early to claim our usual table," said Zbziebkowski.

She hasn't missed a Grumman picnic since 1956. "I'm 35 and I've been coming since I was six years old – first with my father and now as a Grummanite myself," she said.

"We're introducing our third generation to Grumman picnics," said Susan Barra, daugter of Grumman retiree Bob Gunwaldsen, as she and her family waited for the L.I.R.R. minitrain to arrive. The train ride was Barra's childhood favorite – and the same goes for her sons, three-year-old Sal and five-year-old Robert. A popular Calverton ride, the vintage train made its debut at the 1939 New York World's Fair.

In addition to popular rides, the kiddie show at high noon featuring circus entertainers drew a large crowd. Throughout the day, music was supplied by the Grumman Employees Band. Clowns – along with an organ player and monkey – strolled from table to table providing entertainment.

For some families, the picnic was a first time event. Peggy Kuhn of Data Systems Division and her husband Henry plan to make it an annual event for their family. "We are impressed that there was so much for the kids to do on their own," said Peggy Kuhn. Their children Madelon, 14, and Lauren, 11, made a full day of it – competing in the relay races and going on the rides.

The company was taking no chances on the weather this year. When torrential downpours drenched Long Island on Friday, the postponement was broadcast throughout the plants.

"You always take a gamble when you postpone a major event," said Joe Gavin, chairman of the Executive Committee. "Saturday morning things were still a little wet from Friday's downpour, but Sunday was made to order."

Some Grummanites and guests couldn't change their weekend agenda. "I was sorry that the Tokyo baseball team couldn't be here," said Bierwirth. "And the crowd was a little small. Unfortunately, those were the casualties of the postponement. But what we got in terms of the weather was great."

"Attendance suffered a little bit this year, but the spirit certainly didn't," added Chet Baumgartner, manager of Employee Services. "This year, we cut down substantially on the number of non-Grumman families, with our requirement that there be a badge in every car. Adult participation in the activities was better than ever."

Though it was a smaller crowd, the picnickers didn't hold back when it came to the picnic goodies: over 14,000 hot dogs, 10,800 cups of ice cream, 9,000 cups of soda, 5,600 cartons of milk, and 67 half-kegs of beer. ■

Drive Against Hunger

At the Family Picnic, Grummanites remembered their less fortunate Long Island neighbors and donated close to a ton of food.

"It may be difficult for us to imagine, but there are 350,000 needy people in our communities," said Chairman Jack Bierwirth. "Many of them are children or elderly persons and hunger for them is a painful reality."

The food drive was organized by Grumman's Employee Contribution Council and Long Island Cares, a not-for-profit organization that works with local communities in combating hunger.

"We were very satisfied with the results," said Steve Leinau, program director for Long Island Cares. "Our collection of 2,000 pounds was a good showing. I think it was especially good when you consider the change in the date of the picnic and the fact that this was the first time for Grumman.

"It was especially heartening to see that Grummanites who forgot about the food drive gave money instead," said Bill Waas, director of strategic planning for GDS and a food drive volunteer. "Over two-thirds of the cars stopped to make food or monetary donations."

"Grumman's contributions will go a long way in supplying community food bank efforts here on Long Island," said Leinau. "It is the large, organized drives by employee groups that really make the difference in our efforts." ■

V-J Day Forty Years Later

Grummanites Recall The Last Days Of WWII

Forty years ago this month, peace was declared around the world. World War II was over. Japan surrendered on Tuesday, August 14, 1945. Nazi Germany had fallen three months earlier.

The good news spread fast throughout the Grumman plants that Tuesday. The Nite Owls were just arriving for their 10-hour shift when they heard the news and whooped it up in grand style. That night, the Grumman War Production Corps disbanded. The company closed down for a few days to make plans for peacetime production.

The following Grummanites share their recollections of that historic period 40 years ago this month.

Al Gustaitis

Al Gustaitis, Point Mugu, California.

"Japan and the atom bomb were worlds away from me. At the time I was an eight-year-old refugee waiting in a small town in Germany called Rabensburg for the Allies to liberate my family.

"Before that, my parents and I had been rounded up and placed in a concentration camp by the Germans. My father was separated from us and sent to the Eastern Front to dig ditches. Fortunately he escaped and came back for my mother and me. He snuck us out under the fence and we escaped on a riverboat at night.

"We headed as far south as we could so that we would be in Allied territory when the war ended and not in Russian territory. When Free French troops marched into our sector, that was the end of the war for me.

"I was very young at the time, but I can remember the great feeling of relief and freedom that I had when I knew we were all safe. I grew up with the war going on all around me. It was a very tense and frightening time. The prospect of peace and freedom seemed like heaven."

***Edward Bruns** retired from Grumman's Bethpage Transportation department in May 1984. He is currently living in Jensen Beach, Florida near the company's Stuart Operations facility.*

"I was one of the guys waiting in the Phillipines ready to invade Japan when they dropped the bombs.

"None of us were looking forward to a battle with the Japanese on their home turf. In fact, most of us had the feeling that we wouldn't return from a fight like that.

"I went into the Air Corps in 1943 after getting two deferments while working for Grumman on the Avenger production line. As a member of a communications group, I would have been one of the first ones into Japan had we invaded. When we heard over the radio that the bomb had been dropped, it sure lifted a lot of tension off everyone. That night we partied until dawn.

"Of course I didn't get home as soon as I expected. My division was turned into a Military Police unit and I stayed in Japan for about a year. A remarkable thing about that stay in Japan was how quickly we all lost any hatred we might have had for the Japanese. They were very noble in defeat, and Japan is a beautiful country.

Edward Bruns

***Lorraine Vogel**, payroll administrator-Product Development Operations Center, Bethpage, New York.*

Lorraine Vogel

"After the atomic bombs were dropped, we all thought 'this is it, they have to surrender now.' But even when it was official, it took some time to sink in.

"After years of putting up with rationing it was great to be able to find things in the stores again. During the war, you had to go into New York City to shop and even then stores didn't have much. You would see a line forming and you'd just get on it. You knew the line was probably for something in short supply, like shoes or nylon stockings.

"As busy as Grumman was during the war, I was even busier when it ended. The company released a lot of the wartime production people and I processed all of the terminations. I also sent out telegrams to the people the company wanted to retain.

"It took a while for everything to settle back to normal. When my brother came home from the service, it seemed strange for all of us to be back together again. Strange, but very good."

George Brown

***George Brown**, corporate vice president-Washington Affairs, Washington, D.C.*

"I was a member of the Tuskegee Black Airmen Squadron stationed in Tuskegee, Alabama. I had been undergoing retraining in order to be sent to the Pacific theatre when the war ended.

"Until the end of the war was announced, I didn't realize how much tension and actual fear I had been suppressing inside myself. But when we heard about the bomb being dropped, we realized that the end of the war was in sight. It was like an enormous weight had been lifted off me.

"That whole period of my life was very new and strange to me. I hated the whole idea of war and killing from the start. I was very apprehensive about flying off to battle thousands of miles from home in the Pacific. Also, Alabama wasn't a very comfortable place for a young black man at that time.

"What I didn't realize at the time was how relieved my parents would be. When I got home, my mother told me how my father would sit out on the porch sometimes and pray that I would get home safely. Both of them were ecstatic to get their only son back in one piece."

Eric Hawk

***Eric Hawk**, manager, Corporate Communication, Grumman Data Systems.*

"I was sitting in an outdoor theatre on Luzon in the Phillipines watching a very young Elizabeth Taylor in "National Velvet." They stopped the movie to tell us that the U.S. had just dropped an atomic bomb on Hiroshima. Just the word 'atomic' seemed so strange and powerful that we knew this meant the end of the war. That was the first time I let myself think about making it home alive.

"Everyone just went crazy – laughing, crying, hugging each other. It seemed like one minute we were on the edge of disaster, getting ready to invade the main Japanese islands, and the next we had received a reprieve. Not too many of us had expected to come out of an invasion alive.

"Once we had occupied Japan, I got a chance to go through Hiroshima and Nagasaki with my outfit. No one knew anything about radiation or its effects back then. I remember being awed at the destruction. There was literally nothing left but charred debris of what had been two big cities. It was a very strange and frightening sight." ■

College Kids Pick Up More Than Paychecks At Grumman This Summer

You're a lowly college student, broke at the end of the school year, and mom and dad both beseech you to "get a job!" How do you spell relief? The Grumman Summer Student Employment Program.

About 650 college students worked at Grumman this summer. Most were the children of Grummanites who have been with the company 25 years or longer. The others were Grumman scholars and junior technical operations students hired because of their interest in engineering.

"The summer employment program is really a form of financial aid for the students and their parents," said Renee Cox, manager of the program. "Some students use the money to help pay for their education. For others, it means not having to work while the school year is in progress."

Summer employees also get valuable exposure to the business world – which, in today's competitive job market, certainly comes in handy. Meanwhile, Grumman benefits from building a pool of potential employees to recruit after graduation.

Kirk McCarthy said he was lucky to get a job operating machinery at Grumman's Glen Arm facility in Maryland. In past summers, he had worked in a drugstore and on a farm, shucking ears of corn.

"Do you know how cut up my hands used to get on the farm? Grumman was a lifesaver," said McCarthy, an engineering student at Penn State.

For Elizabeth Gavin of Pt. Mugu, California, working at Grumman meant a steady job. "Just knowing where I'm going to work every week is a relief," said Gavin, a student at the University of California-Santa Barbara. "Many of my friends work as temps [temporary service agency employees]. I'm lucky. Here, I have a stable job."

A business economics major, Gavin has been able to apply her college studies to her job in Financial Operations.

So has Jim Jovene, a senior at Stevens Institute of Technology (N.J.). The engineering student designed integrated circuits in Bethpage this summer as a junior technical operations employee.

"My experiences at Grumman have gone beyond just technical wizardry, though," said Jovene. "The people have been really friendly and helpful, and I've realized how much teamwork is involved in engineering."

Ramona Anderson, a nursing student at Bethune-Cookman College in Florida, credited her summer job with giving her a better idea of what life after college will be like. She spent her summer months in the First Aid Department at Stuart Operations (Fla.).

"I originally thought nursing wouldn't be that difficult a job," she said. "I was wrong! I'm having trouble just doing the paperwork."

While most students were happy with their summer assignments, some were disappointed that they weren't been placed in jobs related to their studies. "The company tries to place as many students in related jobs as possible," Cox noted. "Unfortunately, not everyone can be accommodated."

Kevin Lee, a business management student at Suffolk Community College, didn't complain. His first Grumman job entailed changing lightbulbs and running errands for Facilities Maintenance in Grumman Data Systems. "I feel pretty lucky," said Lee. "At least I got to see the company instead of just reading about it in newspapers. And anything is better than working at McDonalds." Next year, he hopes to get an office job.

Brenda Sand, a SUNY-Oswego student who worked in Food Service in Bethpage, didn't expect to like her summer job in the cafeteria. "Once I got here," said Sand, "I realized that this was a family operation. It's not bad at all. I got to meet a lot of cuties as well as interesting people, even astronauts."

Anthony Mascia and Scott Holland were glad to have a job – and even happier that it involved the outdoors.

Mascia, who attends Suffolk Community College, liked his job in Facilities last summer and returned to the department again this year. "I enjoy working outside and in the sun," said Mascia. "This way I get to work on my tan and get paid for it. Let's see the office workers top that."

Holland, enrolled at SUNY-Farmingdale, added: "There aren't any hassles when you're working outside. The crew is very equal – we all know what we have to do. I wouldn't mind cutting lawns again next year."

Summer is just about over, and the 1985 student employees are heading back to school. Some return to campus a little wiser. A few sport fantastic tans. Most managed to bank a little money. And all can add the name of a major corporation to their resumes. ■

This article was written by Laura Orella, a junior at SUNY-Stony Brook who majors in English and journalism. She recently completed her summer assignment at Grumman World.

Summer Aid. *This summer, Ramona Anderson (above) worked in Stuart Operations' First Aid Department. Kevin Lee (below) helped deliver computer runs for Data Systems.*

Meeting People. *Brenda Sand (above) met some interesting people while serving meals for Food Service. Jim Jovene (L) learned about the teamwork behind Grumman's 'technical wizardry.'*

A. J. Caulfield Jr.

T. Romer

F. Sacca

V. J. Liotta

N. D. Dvoskin

J. H. McErlean

M. C. Thorne

J. W. Simms

E. J. Booth Jr.

J. A. Barrie

R. H. Ingemarson

D. A. D'Amico

K. G. Koehler

J. B. Lynch

A. D. Bowman

D. P. Murray

Service Milestones

45

Richard A. Pollog, Maint. Controller (7)
Reno J. Nicoli, Land. Gear Carrier (25)

35

Andrew Emanuel, Sub-Assy. (1)
Herman P. Wenz, Prog. Engrg. Mgrs. (9)
John A. Allen, Reqts. Plann. (30)
John Strakosch, Veh. Engrg. Mgmt. (35)
Frank J. Cipriano, Tech. Reqmts. (40)
John A. Wallace, Prog. Engrg. Mgrs. (40)

30

Robert Hurtig, Fuse. Joining (1)
Nelson J. Giordano, Prod. Cntl.-Parts Cntl. (2)
Robert E. Van Dyke, Mech. Insp. (2)
Joseph S. Vanderloski, Trans. Ops. (3)
Bernard J. Morgenstern, Mat'l. Rev. (3)
Edwin J. Brooks, Mach. Parts Insp. (3)
Albert V. Baker, Adv. Proc. Mgmt. (5)
Donald Calquhoun, Prelim. Des. Mgmt. (5)
Nathan Kirschbaum, Prelim. Des. Mgmt. (5)
Donald J. Cook, A.S.T. Mgmt. (5)
William M. Clough, Plt. Mat'l. Stor. & Distr. (6)
George M. Lofsten, Whse. (6)
Erwin Bruns, Struct. Sys. Prod. Supt. (6)
Edwin W. Ferris Jr., ATS Ops. (7)
Stanley W. Wiercinski, Prod. Mgt. (8)
Thomas J. McGowan, Mfg. Prog. Mgt. (9)
John F. Nordin, Mass. Prop. Anal. (25)
Richard L. Kline, Prog. V.P. Space Sta. (25)
Harry T. Breul, Sys. Sci. (35)
Walter J. Stehlin, Details (37)
Dickerson F. Cutler, ILS Sub-Sys. Engrg. (40)
Richard A. Schwier, Elect. Cable Fa. (43)
Peter L. Treffeisen, Invent. Mgmt. (44)
James F. Morgan Jr., Prod. Mmt. (77)
Robert F. Grover, Prog. Cont. (77)
Bruce C. Gray, Prod. (88)
Gilbert T. Chan, Land. Gear Carrier (110)
Joseph F. Hannan, Grumman International (GHQ)
Lewis L. Simpson, Prod. Soft. Supt., Grumman Data (237)
Ed Carle, Grumman Houston

25

Anthony J. Caulfield Jr., Navig. & Cont. Equip. Des. (1)
Theodore Romer, Mfg. Scheduling (2)
Edward J. Roe, Food Serv. (2)
Frank Sacca, Inst. Mgmt. (5)
Victor J. Liotta, Cap. Plng. & WC Sched. (5)
Norman D. Dvoskin, Ops. Anal. (5)
John H. McErlean, ILS Equip. Des. Eng. (6)
Marvin C. Thorne, Indust'l. Safety/Hygien (6)
James W. Simms, Engines (6)
Edward J. Booth Jr., Assy Methods & Plann. (6)
James A. Barrie, Tech. Serv. (6)
Henry T. Wagner, Flt. Avion. (8)
Roy H. Ingemarson, Rec./Shipping (8)
Dominick A. D'Amico, Bonding Methods, (9)
Frank J. Wulforst, ILS Pubs. Cont. (15)
Kenneth G. Koehler, Prog. Mgmt. E-2 (25)
John B. Lynch, Mat'l. Mgmt. (30)
Adam D. Bowman, Elect. Engg. Pwr./Ctrls. (30)
John T. Graham, Res. Tech. Supt. & Ops. (35)
Douglas P. Murray, Ills. & Prod. (39)
Jerome M. Lester, Prog. Mgmt. A-6 (40)

J. M. Lester

J. J. Matuska

G. J. Bjertnes

L. J. Kolodzeski

R. L. Benson

G. A. Vengroski

John J. Matuska, Mech. Struct. & Assy. (43)
George J. Bjertnes, Avion. Sys. Test (43)
Lawrence J. Kolodzeski, M & P (66)
Richard L. Benson, Honeycomb Layup & Bond, (66)
George A. Vengroski, Production (88)
Walter B. Monsen, ILS Sys. Concept (106)
Edmond F. Boivin, ILS Auto. Test Equip. Engr. (106)
Jerome Winsten, ILS Engrg. Mgmt. (108
Donald K Hiestand, ILS Ops. Support (110)
Richard W. Hogan, IRM - Info. Process (111)

W. B. Monsen

J. Winsten

D. K. Hiestand

R. W. Hogan

Jaws On LI. *Dan Azzato (L) and fellow Grummanites (L to R) Steve Burhman, Dave Trefinovich, and Ray Whittenman teamed up to catch this record-breaking 867-lb. Thresher shark last month off Long Island.*

A Whale Of A Shark Hunt

"The King of the Threshers" and three other Grummanites landed a New York State record-breaker in the July 13th Great Gun Anglers Shark Tournament on Long Island.

Dan Azzato earned the nickname "The King of the Threshers" by catching five Thresher sharks – rarities in waters beyond California and New Zealand – in the past two years.

On July 13, he reeled in an 867-pound Thresher with a 50-pound tackle and a homemade rod with the help of Calverton mates Steve Buthman, Dave Trefinovich and Ray Whittenman.

This dangerous carnivore earned the four Grummanites $1,760 and a New York State record. "It's a potential world record-tying fish," says Azzato. "But first we have to have the line tested by the International Game Fishermen's Association and send the scale certification in.

"You have to be lucky to have a big fish bite," says Azzato, "but it takes skill and teamwork to land him." The 16-foot female fought for almost two hours before they were able to get it alongside the boat.

And then it was dangerous at both ends. A thresher's tail looks like a sickle and is half the fish's length. "It makes this whining sound as it flaps through the air. The tail is very powerful and very dangerous. I was yelling at Ray to turn the boat around and he couldn't hear. The shark's tail was hitting the boat right near him." ■

Zip Codes Plus Four

Within the next few years, the U.S. Post Office will be changing all existing zip codes to nine digits.

For mail sent to Bethpage, people are asked to begin adding the following four digits to the existing 11714 zip code:

Grumman Corporation.-3580
Aerostructures Divison-3581
Aircraft Systems Division-3582
Allied Division-3583
Data Systems Division-3584
Electronics Systems Division-3585
Services Division-3586
Joint-STARS Division-3587
Space Systems Division-3588
Grumman Credit-3589
Grumman International-3590
Paumanock Development Corporation-3591

Classified mail must continue to be sent to Grumman Aerospace Corporation. The address for all such mail is: Grumman Aerospace Corporation, South Oyster Bay Road, Bethpage, N.Y. 11714-3592. ■

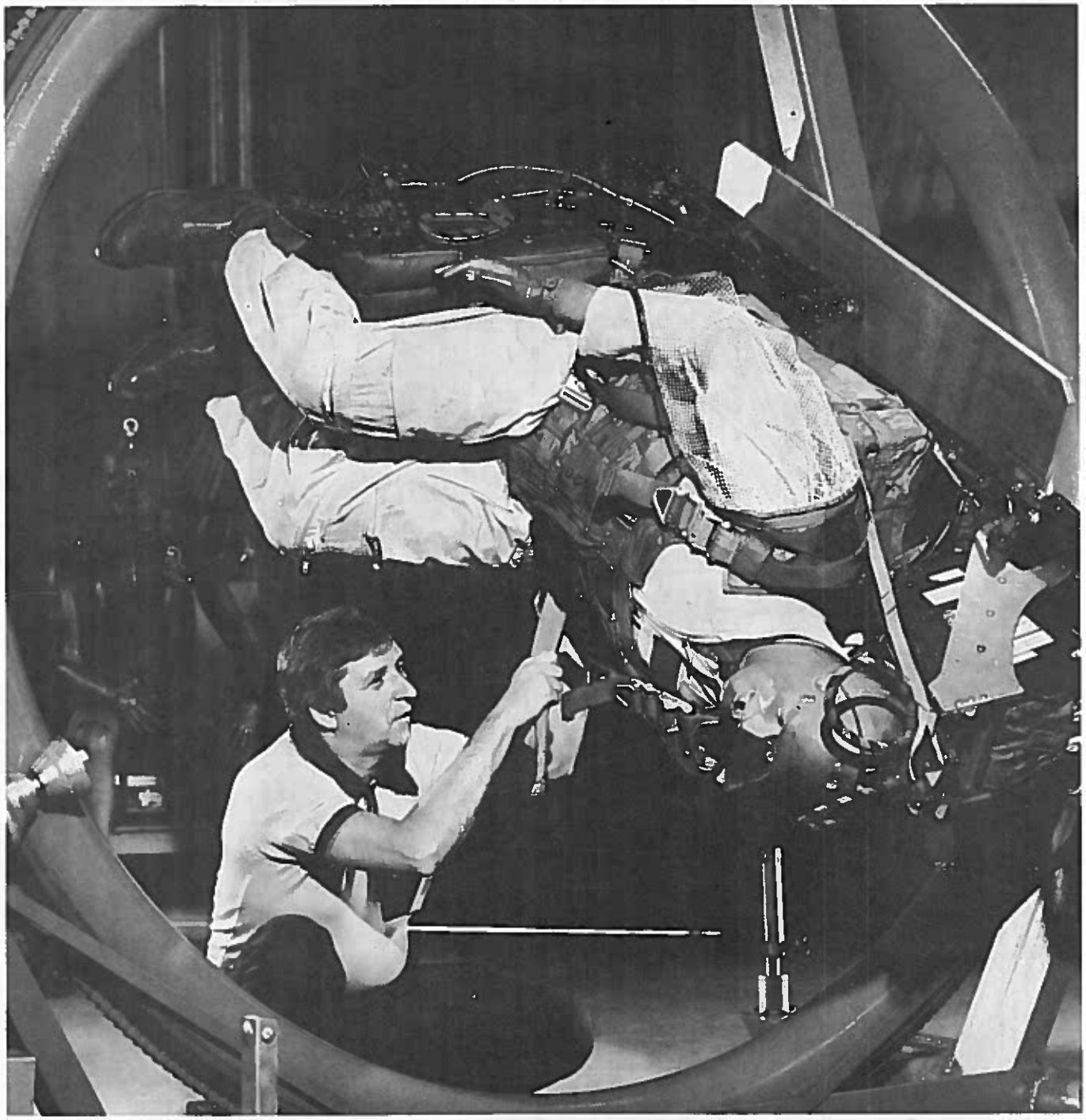
New Appointments

Two new appointments have been made in Grumman's Flight Transportation Department.

Walter Smith has been named chief pilot and deputy director. He reports to Ted Faller, director of Flight Transportation.

John Flood has been appointed senior flight engineer. He reports to Faller and Smith. ■

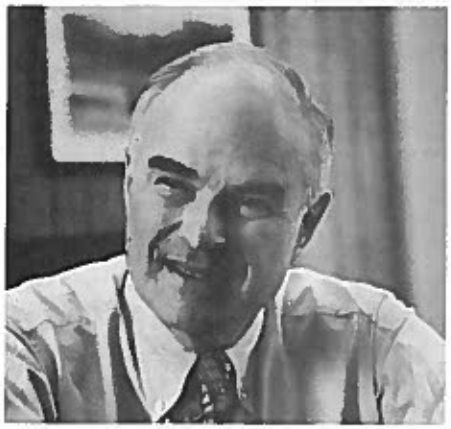
GrummanWorld
August 30, 1985



It's A Topsy-Turvy World, Isn't It, Ollie?

Strapped into a special test rig, a Grumman Alderson Research Dummy nicknamed Ollie is packed with instrumentation. While Ollie hangs upside-down, Seat Lab technician George Hammelman checks the dummy's gauges during an F-14 ejection seat test in Plant 5. Ollie and his buddy Stanley are used to test aircraft ejection seats and restraints.

A Letter From The Chairman



Earlier this year, we put our new organization plan into place. Now, in every one of our seven operating divisions and two proposed divisions, we are awaiting word on major new contracts. I have never seen a company so poised for dramatic growth.

Here are just a few of the things we're looking at:

In our Aerostructures Division, an award to build Penguin Missile assemblies could mean hundreds of millions of dollars.

Aircraft Systems wants to provide the Navy with electronic test equipment through the year 2000. The contract to build a Consolidated Automated Support System (CASS) is estimated at more than $2 billion. A decision narrowing the field to two competitors has been announced; one winning team consists of Grumman, Hughes, and General Dynamics' electronics division.

This Fall, the United States Postal Service is expected to decide who will build its 99,150 Long Life Vehicles. A win for Grumman Allied would mean $1 billion over the next five years.

Also this Fall, the Data Systems Division expects word on two U.S. Navy bids. One contract could be worth $45 million over five years, the other could be worth as much as $50 million over 10 years. And Data Systems should get news soon about the central processing unit (CPU) augmentation it wants to produce for the Marine Corps – a series of contracts that would be worth $70 million over eight years.

With a nod from the Army, Electronics Systems Division is ready to develop and build test support equipment that could be worth $1 billion over 10 years.

St. Augustine has a shot at a three-year, $60 million contract to overhaul S-2 aircraft for Venezuela.

A substantial win would turn the proposed Space Systems group into an operating division. Space Systems is already working as a team member on three work packages for the Space Station. It is, of course, unlikely that all three could turn into hardware contracts – but Grumman's share would be more than $850 million if they did. Space Systems has also bid on a surveillance and tracking system for the Air Force: a 10-year, $2 billion opportunity.

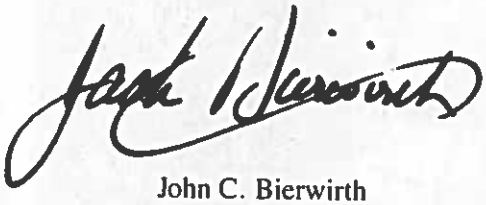
NASA will soon make a decision about the Space Transportation System Operations Contract (STSOC). Technical Services thinks it has a good chance to win what could be a 15-year, $5.5 billion job supporting routine Shuttle flights.

Another proposed division, Joint STARS, could soon earn its wings if the Air Force buys the Joint STARS missile guidance system – a five-year, $1 billion program.

Our best assessment is that we have at least a 50-50 chance of winning each of these competitions. They represent an opportunity for growth unparalleled in our history. If we're successful, this growth will strain our resources – for we will have to invest heavily in the initial phases, as any new business requires.

Ironically, the more successful we are, the more we'll have to bear down on controlling our costs so that we can apply the necessary resources to our new opportunities.

All of this will change the character of our business. It will challenge us as a company and as individuals. We have opportunities we've never had before. Most companies never have a chance to take off. Let's make sure we do!



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